AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below. This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims

Claims 1-27 (canceled).

Claim 28 (Previously Presented): A method of treatment of human liver, breast, colon or rectal malignancies, comprising administering to a subject in need thereof a modified, full-length recombinant human arginase I polypeptide, which is covalently linked to at least one polyethylene glycol (PEG) molecule, wherein the administration of the modified, full-length recombinant human arginase I polypeptide reduces the physiological arginine level in the subject to below 10 μM for at least 3 days.

Claim 29-42 (canceled).

Claim 43 (Currently amended): A method of treatment of human liver, breast, colon or rectal malignancies, comprising administering to a subject in need thereof a modified, full-length recombinant human arginase I polypeptide of 80-100% purity as determined by gel chromatography and densitometry, which is covalently linked to at least one polyethylene glycol (PEG) molecule ~~The method of treatment according to claim 24~~, wherein the administration of the modified, full-length recombinant human arginase I polypeptide reduces the physiological arginine level in the subject to below 10 μM for at least 3 days.

Claim 44 (Previously Presented): The method of treatment according to claim 28, wherein the wherein the modified, full-length recombinant human arginase I polypeptide has a second phase half-life of at least about 21 days *in vivo*.

Claim 45 (Previously Presented): A method of treatment of human liver, breast, colon or rectal malignancies, comprising administering to a subject in need thereof a modified, full-length recombinant human arginase I polypeptide comprising the amino acid sequence of SEQ ID NO: 9 which is of 80-100% purity, covalently linked to at least one polyethylene glycol (PEG) molecule, and has an extended half-life of at least 3 days.

Claim 46 (Previously Presented): The method of treatment according to claim 45, wherein the administration

of the modified, full-length recombinant human arginase I polypeptide reduces the physiological arginine level in the subject to below 10 μM for at least 3 days.

Claim 47 (New): The method of claim 28, wherein the modified, full-length recombinant human arginase I polypeptide has an amino acid sequence encoded by a nucleic acid of SEQ ID NO. 8.

Claim 48 (New): The method of claim 28, wherein the modified, full-length recombinant human arginase I polypeptide has the amino acid sequence of SEQ ID NO. 9.

Claim 49 (New): The method of claim 28, wherein the modified, full-length recombinant human arginase I polypeptide has an amino acid sequence encoded by a nucleic acid of SEQ ID NO. 2.

Claim 50 (New): The method of claim 28, wherein the modified, full-length recombinant human arginase I polypeptide has the amino acid sequence of SEQ ID NO. 3.

Claim 51 (New): The method of claim 43, wherein the modified, full-length recombinant human arginase I polypeptide has an amino acid sequence encoded by a nucleic acid of SEQ ID NO. 8.

Claim 52 (New): The method of claim 43, wherein the modified, full-length recombinant human arginase I polypeptide has the amino acid sequence of SEQ ID NO. 9.

Claim 53 (New): The method of claim 43, wherein the modified, full-length recombinant human arginase I polypeptide has an amino acid sequence encoded by a nucleic acid of SEQ ID NO. 2.

Claim 54 (New): The method of claim 43, wherein the modified, full-length recombinant human arginase I polypeptide has the amino acid sequence of SEQ ID NO. 3.

Claim 55 (New): A method of treatment of human liver, breast, colon or rectal malignancies, comprising administering to a subject in need thereof a modified, full-length recombinant human arginase I polypeptide comprising the amino acid sequence of SEQ ID NO. 3 which is of 80-100% purity, covalently linked to at least one polyethylene glycol (PEG) molecule, and has an extended half-life of at least 3 days.

Claim 56 (New): The method of claim 55, wherein the administration of the modified, full-length recombinant human arginase I polypeptide reduces the physiological arginine level in the subject to below 10 μM for at least 3 days.